1. A method to segment a data object to facilitate transfer of said data object from a first computing system to a second computing system, comprising the steps of:

requesting a range of addresses within a storage device of the first computing system containing said data object;

determining a number of storage devices attached to said first computing system available to retain a plurality of segments of said data object;

determining a maximum digital data transfer load for the storage devices attached to said first computing system;

assigning a minimum segment size which is the smallest amount of digital data to be contained within one segment of the data object;

calculating a first segment size as a first function of a number of the storage devices, the current digital data transfer load, the maximum digital data transfer load, and the minimum segment size;

assigning a last segment size as the minimum segment size;

calculating all remaining segment sizes as a second function of the number of the storage devices, the current digital data transfer load, the maximum digital data transfer load, and the minimum segment size; and

partitioning said data object into segments whereby the first segment of the data object is of the first segment size, the last segment of the data object is of the last segment size, and all the remaining segments of the data object is of the remaining segment sizes.

2. The method of claim 1 further comprising the steps of:

assigning one of the number of storage devices to retain each segment of the data object;

assigning an address within the storage devices to identify the location of an assigned segment;

assigning an object name to each segment of the data object; and

transferring each segment to its assigned storage device.

3. The method of claim 1 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V/f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

$\mathbf{SegSize_{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} \big/ \mathbf{M_l} - \mathbf{C_l} \right)$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load, and

C_l is the current digital data transfer load.

4. The method of claim 1 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$\mathbf{SegSize}_{\mathbf{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} \big/ \mathbf{M_l} - \mathbf{C_l}\right)$$

where

N_d is the number of storage devices available to retain the segments of the data object,

M_l is the maximum digital data transfer load, and

C_l is the current digital data transfer load.

5. The method of claim 1 further comprising the step of:

determining a file interactivity factor describing a number of jumps by the second computing system within the data object.

6. The method of claim 5 wherein the first function is further dependent upon the file interactivity factor.

7. The method of claim 6 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V/f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

$\mathbf{SegSize}_{\mathbf{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l}\right) + \mathbf{I}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load, and

I is the file interactivity factor.

8. The method of claim 5 wherein the second function is further dependent upon the file interactivity factor.

9. The method of claim 8 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize_{min}}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$\mathbf{SegSize_{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} \big/ \mathbf{M_l} - \mathbf{C_l}\right) + \mathbf{I}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load, and

I is the file interactivity factor.

10. The method of claim 1 further comprising the step of:

determining a file usage factor describing a number of requests for said data object for a period of time.

11. The method of claim 9 wherein the first function is further dependent upon the file usage factor.

12. The method of claim 10 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize_{min}}, \mathbf{V/f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

$\mathbf{SegSize_{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right) + \mathbf{H}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load, and

H is the file usage factor.

13. The method of claim 9 wherein the second function is further dependent upon the file usage factor.

14. The method of claim 13 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize}_{min}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$\mathbf{SegSize}_{min}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N}_d + \left(\mathbf{M}_l / \mathbf{M}_l - \mathbf{C}_l \right) + \mathbf{H}$$

where

$\mathbf{N}_d$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M}_l$ is the maximum digital data transfer load,

$\mathbf{C}_l$ is the current digital data transfer load, and

H is the file usage factor.

15. The method of claim 1 further comprising the steps of:

determining a file usage factor describing a number of requests for said data object for a period of time; and

determining a file interactivity factor describing a number of jumps by the second computing system within the data object.

16. The method of claim 15 wherein the first function is further dependent upon the file usage factor and the file interactivity factor.

17. The method of claim 16 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V/f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

$\mathbf{SegSize}_{\mathbf{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_I} \big/ \mathbf{M_I} - \mathbf{C_I}\right) + \mathbf{H} + \mathbf{I}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

M_l is the maximum digital data transfer load,

C_l is the current digital data transfer load,

H is the file usage factor, and

I is the file interactivity factor.

18. The method of claim 15 wherein the second function is further dependent upon the file usage factor and the file interactivity factor.

19. The method of claim 18 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$SegSize_{min}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right) + \mathbf{H} + \mathbf{I}$$

where

N_d is the number of storage devices available to retain the segments of the data object,

M_l is the maximum digital data transfer load,

C_l is the current digital data transfer load,

H is the file usage factor, and

I is the file interactivity factor.

20. The method of claim 1 wherein the data object is a video data file to be transferred isochronously to the second computing system.

21. A digital data service system in communication with a plurality of computing systems to provide at least one data object of a plurality of data objects to at least one of the plurality of computing systems, comprising:

a plurality of data object storage devices in communication with each other and with any of the plurality of computing systems; and

a segmentation apparatus in communication with the plurality of data object storage devices to fragment any of the data objects into a plurality of segments to allow transfer to and processing by at least one of the computing systems of said segments;

whereby the segmentation apparatus fragments each data object as a function of demand for the data objects, size of each data object of the plurality of data objects, amount of retention space available on each of the plurality of digital data storage devices, and available bandwidth for communication with the plurality of computing systems.

22. The system of claim 21 wherein the segmentation apparatus performs the steps of:

requesting a range of addresses within a storage device containing said data object;

determining a number of storage devices available to retain a plurality of segments of said data object;

determining a maximum digital data transfer load for the storage devices;

assigning a minimum segment size which is the smallest amount of digital data to be contained within one segment of the data object;

calculating a first segment size as a first function of a number of the storage devices, the current digital data transfer load, the maximum digital data transfer load, and the minimum segment size;

assigning a last segment size as the minimum segment size;

calculating all remaining segment sizes as a second function of the number of the storage devices, the current digital data transfer load, the maximum digital data transfer load, and the minimum segment size; and

partitioning said data object into segments whereby the first segment of the data object is of the first segment size, the last segment of the data object is of the last segment size, and all the remaining segments of the data object is of the remaining segment sizes.

23. The system of claim 22 wherein the segmentation apparatus the further performs the steps of:

assigning one of the number of storage devices to retain each segment of the data object;

assigning an address within the storage devices to identify the location of an assigned segment;

assigning an object name to each segment of the data object; and

transferring each segment to its assigned storage device.

24. The system of claim 22 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V/f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

$\mathbf{SegSize_{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right)$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load, and

C_l is the current digital data transfer load.

25. The system of claim 22 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$\mathbf{SegSize}_{\mathbf{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right)$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load, and

$\mathbf{C_l}$ is the current digital data transfer load.

26. The system of claim 22 further comprising the step of:

determining a file interactivity factor describing a number of jumps by the computing system within the data object.

27. The system of claim 26 wherein the first function is further dependent upon the file interactivity factor.

28. The system of claim 27 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V}/\mathbf{f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables

$\mathbf{SegSize_{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l}\right) + \mathbf{I}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load, and

I is the file interactivity factor.

29. The system of claim 22 wherein the second function is further dependent upon the file interactivity factor.

30. The system of claim 29 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$\mathbf{SegSize}_{\mathbf{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} \middle/ \mathbf{M_l} - \mathbf{C_l} \right) + \mathbf{I}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load, and

I is the file interactivity factor.

31. The system of claim 22 further comprising the step of:

determining a file usage factor describing a number of requests for said data object for a period of time.

32. The system of claim 31 wherein the first function is further dependent upon the file usage factor.

33. The system of claim 32 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V/f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

$\mathbf{SegSize}_{\mathbf{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right) + \mathbf{H}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load, and

H is the file usage factor.

34. The system of claim 31 wherein the second function is further dependent upon the file usage factor.

35. The system of claim 34 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize}_{min}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$\mathbf{SegSize}_{min}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right) + \mathbf{H}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load, and

H is the file usage factor.

36. The system of claim 22 further comprising the steps of:

determining a file usage factor describing a number of requests for said data object for a period of time; and

determining a file interactivity factor describing a number of jumps by the computing system within the data object.

37. The system of claim 36 wherein the first function is further dependent upon the file usage factor and the file interactivity factor.

38. The system of claim 37 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V}/\mathbf{f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

$\mathbf{SegSize}_{\min}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_I} / \mathbf{M_I} - \mathbf{C_I} \right) + \mathbf{H} + \mathbf{I}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

M_l is the maximum digital data transfer load,

C_l is the current digital data transfer load,

H is the file usage factor, and

I is the file interactivity factor.

39. The system of claim 37 wherein the second function is further dependent upon the file usage factor and the file interactivity factor.

40. The system of claim 39 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize_{min}}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$SegSize_{min}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l}\right) + \mathbf{H} + \mathbf{I}$$

where

N_d is the number of storage devices available to retain the segments of the data object,

M_l is the maximum digital data transfer load,

C_l is the current digital data transfer load,

H is the file usage factor, and

I is the file interactivity factor.

41. The system of claim 21 wherein the data object is a video data file to be transferred isochronously to the computing system.

42. An apparatus to segment a data object to facilitate transfer of said data object from a first computing system to a second computing system, comprising:

means for requesting a range of addresses within a storage device of the first computing system containing said data object;

means for determining a number of storage devices attached to said first computing system available to retain a plurality of segments of said data object;

means for determining a maximum digital data transfer load for the storage devices attached to said first computing system;

means for assigning a minimum segment size which is the smallest amount of digital data to be contained within one segment of the data object;

calculating a first segment size as a first function of a number of the storage devices, the current digital data transfer load, the maximum digital data transfer load, and the minimum segment size;

means for assigning a last segment size as the minimum segment size;

means for calculating all remaining segment sizes as a second function of the number of the storage devices, the current digital data transfer load, the maximum digital data transfer load, and the minimum segment size; and

means for partitioning said data object into segments whereby the first segment of the data object is of the first segment size, the last segment of the data object is of the last segment size, and all the remaining segments of the data object is of the remaining segment sizes.

43. The apparatus of claim 42 further comprising:

means for assigning one of the number of storage devices to retain each segment of the data object;

means for assigning an address within the storage devices to identify the location of an assigned segment;

means for assigning an object name to each segment of the data object; and

means for transferring each segment to its assigned storage device.

44. The apparatus of claim 42 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}\left(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V/f}\right)$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

$SegSize_{min}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right)$$

where

N_d is the number of storage devices available to retain the segments of the data object,

M_l is the maximum digital data transfer load, and

C_l is the current digital data transfer load.

45. The apparatus of claim 42 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize_{min}}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$SegSize_{min}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$f = N_d + \left(\frac{M_l}{M_l - C_l} \right)$$

where

N_d is the number of storage devices available to retain the segments of the data object,

M_l is the maximum digital data transfer load, and

C_l is the current digital data transfer load.

46. The apparatus of claim 42 further comprising:

means for determining a file interactivity factor describing a number of jumps by the second computing system within the data object.

47. The apparatus of claim 46 wherein the first function is further dependent upon the file interactivity factor.

48. The apparatus of claim 47 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize_{min}}, \mathbf{V/f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

$SegSize_{min}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right) + \mathbf{I}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load, and

I is the file interactivity factor.

49. The apparatus of claim 46 wherein the second function is further dependent upon the file interactivity factor.

50. The apparatus of claim 49 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize_{min}}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$\mathbf{SegSize_{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right) + \mathbf{I}$$

where

N$_d$ is the number of storage devices available to retain the segments of the data object,

M$_l$ is the maximum digital data transfer load,

C$_l$ is the current digital data transfer load, and

I is the file interactivity factor.

51. The apparatus of claim 42 further comprising:

means for determining a file usage factor describing a number of requests for said data object for a period of time.

52. The apparatus of claim 51 wherein the first function is further dependent upon the file usage factor.

53. The apparatus of claim 52 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize_{min}}, \mathbf{V/f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

SegSize$_{min}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l}\right) + \mathbf{H}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load, and

H is the file usage factor.

54. The apparatus of claim 51 wherein the second function is further dependent upon the file usage factor.

55. The apparatus of claim 54 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize_{min}}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$\mathbf{SegSize_{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right) + \mathbf{H}$$

where

N_d is the number of storage devices available to retain the segments of the data object,

M_l is the maximum digital data transfer load,

C_l is the current digital data transfer load, and

H is the file usage factor.

56. The apparatus of claim 42 further comprising the steps of:

    determining a file usage factor describing a number of requests for said data object for a period of time; and

    determining a file interactivity factor describing a number of jumps by the second computing system within the data object.

57. The apparatus of claim 56 wherein the first function is further dependent upon the file usage factor and the file interactivity factor.

58. The apparatus of claim 57 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize_{min}}, \mathbf{V/f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

$\mathbf{SegSize_{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right) + \mathbf{H} + \mathbf{I}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load,

H is the file usage factor, and

I is the file interactivity factor.

59. The apparatus of claim 56 wherein the second function is further dependent upon the file usage factor and the file interactivity factor.

60. The apparatus of claim 57 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize_{min}}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$\mathbf{SegSize_{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right) + \mathbf{H} + \mathbf{I}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load,

H is the file usage factor, and

I is the file interactivity factor.

61. The apparatus of claim 42 wherein the data object is a video data file to be transferred isochronously to the second computing system.

62. A medium for retaining a computer program to segment a data object to facilitate transfer of said data object from a first computing system to a second computing system, whereby said computer program executes the steps of:

requesting a range of addresses within a storage device of the first computing system containing said data object;

determining a number of storage devices attached to said first computing system available to retain a plurality of segments of said data object;

determining a maximum digital data transfer load for the storage devices attached to said first computing system;

assigning a minimum segment size which is the smallest amount of digital data to be contained within one segment of the data object;

calculating a first segment size as a first function of a number of the storage devices, the current digital data transfer load, the maximum digital data transfer load, and the minimum segment size;

assigning a last segment size as the minimum segment size;

calculating all remaining segment sizes as a second function of the number of the storage devices, the current digital data transfer load, the maximum digital data transfer load, and the minimum segment size; and

partitioning said data object into segments whereby the first segment of the data object is of the first segment size, the last segment of the data object is of the last segment size, and all the remaining segments of the data object is of the remaining segment sizes.

63. The medium of claim 62 further executing the steps of:

means for assigning one of the number of storage devices to retain each segment of the data object;

means for assigning an address within the storage devices to identify the location of an assigned segment;

means for assigning an object name to each segment of the data object; and

means for transferring each segment to its assigned storage device.

64. The medium of claim 62 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize}_{min}, \mathbf{V/f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

$\mathbf{SegSize}_{min}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l}\right)$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load, and

$\mathbf{C_l}$ is the current digital data transfer load.

65. The medium of claim 62 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}\left(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V/f}\right)$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$\mathbf{SegSize_{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} \big/ \mathbf{M_l} - \mathbf{C_l} \right)$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load, and

$\mathbf{C_l}$ is the current digital data transfer load.

66. The medium of claim 62 further executing the step of:

determining a file interactivity factor describing a number of jumps by the second computing system within the data object.

67. The medium of claim 66 wherein the first function is further dependent upon the file interactivity factor.

68. The medium of claim 67 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize}_{min}, \mathbf{V/f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

$\mathbf{SegSize}_{min}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right) + \mathbf{I}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load, and

I is the file interactivity factor.

69. The medium of claim 66 wherein the second function is further dependent upon the file interactivity factor.

70. The medium of claim 69 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize}_{min}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$\mathbf{SegSize}_{min}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right) + \mathbf{I}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load, and

I is the file interactivity factor.

71. The medium of claim 62 further executing the step of:

determining a file usage factor describing a number of requests for said data object for a period of time.

72. The medium of claim 71 wherein the first function is further dependent upon the file usage factor.

73. The medium of claim 72 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V/f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

$\mathbf{SegSize}_{\mathbf{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N}_{\mathbf{d}} + \left(\mathbf{M}_{\mathbf{l}} \big/ \mathbf{M}_{\mathbf{l}} - \mathbf{C}_{\mathbf{l}}\right) + \mathbf{H}$$

where

$\mathbf{N}_{\mathbf{d}}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M}_{\mathbf{l}}$ is the maximum digital data transfer load,

$\mathbf{C}_{\mathbf{l}}$ is the current digital data transfer load, and

H is the file usage factor.

74. The medium of claim 71 wherein the second function is further dependent upon the file usage factor.

75. The medium of claim 74 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$\mathbf{SegSize_{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} \big/ \mathbf{M_l} - \mathbf{C_l}\right) + \mathbf{H}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load, and

H is the file usage factor.

76. The medium of claim 62 further comprising the steps of:

determining a file usage factor describing a number of requests for said data object for a period of time; and

determining a file interactivity factor describing a number of jumps by the second computing system within the data object.

77. The medium of claim 76 wherein the first function is further dependent upon the file usage factor and the file interactivity factor.

78. The medium of claim 77 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V/f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

$\mathbf{SegSize_{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right) + \mathbf{H} + \mathbf{I}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load,

H is the file usage factor, and

I is the file interactivity factor.

79. The medium of claim 76 wherein the second function is further dependent upon the file usage factor and the file interactivity factor.

80. The medium of claim 79 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize_{min}}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$\mathbf{SegSize_{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right) + \mathbf{H} + \mathbf{I}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load,

H is the file usage factor, and

I is the file interactivity factor.

81. The medium of claim 62 wherein the data object is a video data file to be transferred isochronously to the second computing system.

82. A video data file distribution system in communication with a plurality of computing systems to provide at least one video data file of a plurality of video data files to the plurality of computing systems, comprising:

a plurality of video data file retention devices in communication with each other and with any of the plurality of computing systems; and

a segmentation apparatus in communication with the plurality of video data file retention devices to fragment any of the video data files into a plurality of segments to allow transfer to and processing by at least one of the computing systems of said segments;

whereby the segmentation apparatus fragments each video data file as a function of demand for the video data files, size of each video data file of the plurality of video data files, amount of retention space available on each of the plurality of digital data retention devices, and available bandwidth for communication to the plurality of communication devices.

83. The system of claim 82 wherein the segmentation apparatus performs the steps of:

requesting a range of addresses within a storage device of the first computing system containing said video data file;

determining a number of storage devices attached to said first computing system available to retain a plurality of segments of said video data file;

determining a maximum digital data transfer load for the storage devices attached to said first computing system;

assigning a minimum segment size which is the smallest amount of digital data to be contained within one segment of the video data file;

calculating a first segment size as a first function of a number of the storage devices, the current digital data transfer load, the maximum digital data transfer load, and the minimum segment size;

assigning a last segment size as the minimum segment size;

calculating all remaining segment sizes as a second function of the number of the storage devices, the current digital data transfer load, the maximum digital data transfer load, and the minimum segment size; and

partitioning said video data file into segments whereby the first segment of the video data file is of the first segment size, the last segment of the video data file is of the last segment size, and all the remaining segments of the video data file is of the remaining segment sizes.

84. The system of claim 83 wherein the segmentation apparatus the further performs the steps of:

assigning one of the number of storage devices to retain each segment of the video data file; and

assigning an address within the storage devices to identify the location of an assigned segment.

85. The system of claim 83 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize_{min}}, \mathbf{V/f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

$\mathbf{SegSize_{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right)$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the video data file,

$\mathbf{M_l}$ is the maximum digital data transfer load, and

$\mathbf{C_l}$ is the current digital data transfer load.

86. The system of claim 83 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize_{min}}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$\mathbf{SegSize_{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} \Big/ \mathbf{M_l} - \mathbf{C_l}\right)$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the video data file,

$\mathbf{M_l}$ is the maximum digital data transfer load, and

$\mathbf{C_l}$ is the current digital data transfer load.

87. The system of claim 83 wherein the segmentation apparatus further performs the step of:

determining a file interactivity factor describing a number of jumps by the computing system within the video data file.

88. The system of claim 87 wherein the first function is further dependent upon the file interactivity factor.

89. The system of claim 88 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize_{min}}, \mathbf{V/f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

$\mathbf{SegSize_{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l}\right) + \mathbf{I}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the video data file,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load, and

I is the file interactivity factor.

90. The system of claim 87 wherein the second function is further dependent upon the file interactivity factor.

91. The system of claim 90 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$\mathbf{SegSize}_{min}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right) + \mathbf{I}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the video data file,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load, and

I is the file interactivity factor.

92. The system of claim 83 wherein the segmentation apparatus further performs the step of:

determining a file usage factor describing a number of requests for said video data file for a period of time.

93. The system of claim 92 wherein the first function is further dependent upon the file usage factor.

94. The system of claim 93 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V/f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

SegSize$_{\mathbf{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} / \mathbf{M_l} - \mathbf{C_l} \right) + \mathbf{H}$$

where

$\mathbf{N_d}$ is the number of storage devices available to retain the segments of the video data file,

$\mathbf{M_l}$ is the maximum digital data transfer load,

$\mathbf{C_l}$ is the current digital data transfer load, and

H is the file usage factor.

95. The system of claim 92 wherein the second function is further dependent upon the file usage factor.

96. The system of claim 95 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize}_{\mathbf{min}}, \mathbf{V}/\mathbf{f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$\mathbf{SegSize}_{\mathbf{min}}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N}_{\mathbf{d}} + \left(\mathbf{M}_{\mathbf{l}} / \mathbf{M}_{\mathbf{l}} - \mathbf{C}_{\mathbf{l}} \right) + \mathbf{H}$$

where

$\mathbf{N}_{\mathbf{d}}$ is the number of storage devices available to retain the segments of the video data file,

$\mathbf{M}_{\mathbf{l}}$ is the maximum digital data transfer load,

$\mathbf{C}_{\mathbf{l}}$ is the current digital data transfer load, and

H is the file usage factor.

97. The system of claim 83 further comprising the steps of:

determining a file usage factor describing a number of requests for said data object for a period of time; and

determining a file interactivity factor describing a number of jumps by the computing system within the data object.

98. The system of claim 97 wherein the first function is further dependent upon the file usage factor and the file interactivity factor.

99. The system of claim 98 wherein the first function to determine the first segment size is:

$$\mathbf{Seg1} = \mathbf{min}(\mathbf{SegSize}_{min}, \mathbf{V/f})$$

where

Seg1 is the first segment size,

min is the minimum function of two variables,

$\mathbf{SegSize}_{min}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N}_d + \left(\mathbf{M}_l / \mathbf{M}_l - \mathbf{C}_l \right) + \mathbf{H} + \mathbf{I}$$

where

$\mathbf{N}_d$ is the number of storage devices available to retain the segments of the data object,

$\mathbf{M}_l$ is the maximum digital data transfer load,

C_l is the current digital data transfer load,

H is the file usage factor, and

I is the file interactivity factor.

100. The system of claim 97 wherein the second function is further dependent upon the file usage factor and the file interactivity factor.

101. The system of claim 100 wherein the second function to determine the remaining segment sizes is:

$$\mathbf{Segn} = \mathbf{max}(\mathbf{SegSize}_{min}, \mathbf{V/f})$$

where

Segn is the a segment size for one segment of the remaining segments,

max is the maximum function of two variables,

$\mathbf{SegSize}_{min}$ is the minimum segment size allowed during the fragmenting of the video data file,

V is a total size of the data object, and

f is determined by the formula:

$$\mathbf{f} = \mathbf{N_d} + \left(\mathbf{M_l} \big/ \mathbf{M_l} - \mathbf{C_l} \right) + \mathbf{H} + \mathbf{I}$$

where

N_d is the number of storage devices available to retain the segments of the data object,

M_l is the maximum digital data transfer load,

C_l is the current digital data transfer load,

H is the file usage factor, and

I is the file interactivity factor.

102. The system of claim 83 wherein the video data file is transferred isochronously to the computing system.